Emergency Medical Services

Wisconsin Curriculum
Emergency Medical Technician

Background

Wisconsin revised its emergency medical services (EMS) curricula for all levels between 2011 and 2013 following release of the National EMS Education Standards in 2009. EMS, however, continually evolves. The National Highway Traffic Safety Administration published a revision of the National EMS Education Standards in 2021 incorporating developments from the past decade. The Wisconsin Department of Health Services (DHS), upon recommendation from the Physicians Advisory Committee, also made multiple additions to the Wisconsin EMS scope of practice since 2013 not in the previous curriculum. DHS and the Wisconsin Technical College System therefore launched a curriculum revision project in 2020 to align curriculum with the new National EMS Education Standards and the current Wisconsin EMS Scope of Practice. Through this partnership, EMS educators across the state participated in the development of new curricula for the emergency medical responder (EMR), emergency medical technician (EMT), and advanced emergency medical technician (AEMT) levels.

The new curricula restore alignment with the National EMS Education Standards and Wisconsin Scope of Practice. The new curriculum contains most of the medications, invasive procedures, and other higher risk skills for the EMT level. Inclusion of specific advanced skills involved balancing the need to ensure new students are adequately trained and an effort to minimize additional content impacts to students and service providers. While these decisions were not taken lightly, the changes ensure Wisconsin training centers continue to provide high quality EMS education to our next generation of EMS personnel.

The format of the new EMT curriculum differs from the previous curriculum. The new curriculum does not break down content to the same degree as the previous curriculum. Where the previous curriculum used a complex code to designate depth and breadth within the cognitive, affective, and psychomotor domains, the new curriculum designates depth and breadth within the domains using specific verbs. For example, use of "analyze" for a particular topic indicates greater depth and breadth within the cognitive domain than the use of "identify." The new curriculum is also less prescriptive in details of classroom activities, lesson planning, and other similar functions. These are left for individual training centers and instructors to develop. These changes result in a curriculum shorter and more focused than the previous version.

Description

This curriculum prepares students to perform emergency medical care sanctioned by the DHS scope of practice for the EMT. Includes foundational knowledge and skill application for EMT in the following areas: the EMS system, EMT responsibilities, legal and ethical standards, patient movement techniques, pathophysiology, body systems and functions, patient assessment and treatment, pharmacology, shock and

resuscitation, age-specific patient considerations, special medical considerations, medication administration, airway anatomy and management. Successful completion prepares the learner for the National Registry EMT written examination.

Prerequisite

A Wisconsin EMR certificate or equivalent is required to demonstrate competency in Wisconsin Curriculum for Emergency Medical Responder in addition to the competencies and criteria outlined below.

External Standards

EMT NEMS Scope of Practice 2019 (correlation matrix available)
NEMS EMT Education Standards 2021 (correlation matrix available)
WI EMT Scope of Practice 2023 (correlation matrix available)

* This curriculum is designed to address all three sets of external standards listed above. Each competency or criteria that is identified with an asterix is considered an advanced skill of the curriculum, based upon "optional" skills, equipment or medications from the Wisconsin EMT Scope of Practice. For EMT, these include: End Tidal CO2 Continuous Monitoring; Non-Invasive Positive Pressure Ventilation; ECG Monitor – Acquisition and Transmission; ECG 12, 15, or 18 Lead Acquisition and Transmission; and the following medications - Acetaminophen, Atrovent, Glucagon, and Ibuprofen.

Course Competencies

1. Analyze the EMS System

Assessment Strategies

1.1. Oral, written, graphic, and/or skill assessment

Criteria

1.1. Explain the EMS Systems structure(s)
1.2. Explain the role the National Highway Traffic Safety administration (NHTSA) plays in the system
1.3. Explain Access to the Emergency Medical Services
1.4. Detail the education required for AEMT licensing
1.5. Analyze Authorization to Practice requirements
1.6. Analyze systems of care
1.7. Examine EMS history
1.8. Differentiate between quality improvement and quality assurance in the EMS system
1.9. Analyze the roles of medical oversight in the EMS system
1.10. Explain culture of safety in the EMS system
1.11. Analyze MIH/CP and specialty roles in the EMS system

2. Evaluate EMT responsibilities

Assessment Strategies

2.1. Oral, written, graphic, and/or skill assessment

Criteria

2.1 Categorize EMS professional roles
2.2 Explain EMT role responsibilities
2.3 Explain evidence-based decision principles
2.4 Examine importance of EMT related critical thinking skills
2.5 Analyze EMT responsibilities related to public health
2.6 Characterize professional behavior for the EMR/EMT
2.7 Explain the role of the EMR/EMT in quality improvement
2.8. Analyze the impact of research on emergency medical care
2.9. Explain the EMT scope of practice
2.10. Analyze the emotional aspects of providing emergency care
2.11. Explain the importance of EMR/EMT physical wellness
2.12. Explain the importance of EMR/EMT psychological wellness
2.13. Analyze safety precautions used while working on and near roadways
2.14. Analyze disease transmission safety protocols
2.15. Select appropriate personal protective equipment (PPE) for a variety of responses
2.16. Demonstrate correct use of chosen PPE
2.17. Identify common immunizations
2.18. Identify immunizations that should be obtained by the EMR/EMT

3. Apply EMT operational procedures

Assessment Strategies

3.1. Oral, written, graphic, and/or skill assessment

Criteria

3.1. Analyze field operations
3.2. Explain the importance of emergency vehicle maintenance
3.3. Explain principles of safe ground ambulance operations
3.4. Apply safe ambulance operation principles
3.5. Apply pediatric transport protocols
3.6. Explain the risks and responsibilities of transport
3.7. Apply safety principles of patient care during transport
3.8. Explain crew resource management
3.9. Perform triage for a mass casualty incident
3.10. Adjust treatment for mass casualty incidents
3.11. Apply incident management techniques
3.12. Meet FEMA ICS-100 training requirements
3.13. Meet FEMA ICS-700 training requirements

3.14. Explain safety considerations for air ambulance operations
3.15. Analyze guidelines for use of air ambulance
3.16. Apply safety considerations for vehicle extraction
3.17. Use appropriate PPE during extraction
3.18. Perform simple patient extraction
3.19. Provide patient care during extraction, as needed
3.20. Ensure patient safety during patient extraction
3.21. Analyze hazardous material operations
3.22. Apply decontamination procedures
3.23. Analyze EMS response to terrorism
3.24. Meet WI weapons of mass destruction training requirement*

4. Apply EMT legal requirements and ethical standards

Assessment Strategies

4.1. Oral, written, graphic, and/or skill assessment

Criteria

4.1. Explain legal aspect of EMT scope of practice
4.2. Characterize advance directives
4.3. Explain the ethical issues related to starting and stopping resuscitation
4.4. Explain legal aspects of consent for various populations
4.5. Explain legal aspects of right of refusal requirements
4.6. Identify other legal considerations for the EMS professions
4.7. Apply confidentiality laws
4.8. Explain mandatory reporting laws
4.9. Explain the legal aspects of patient restraint
4.10. Document minimum data set
4.11. Complete pre-hospital care report
4.12. Document patient refusal

5. Apply EMT communication principles

Assessment Strategies

5.1. Oral, written, graphic, and/or skill assessment

Criteria

5.1. Apply therapeutic communication techniques
5.2. Apply positive relationship building techniques
5.3. Use interviewing techniques
5.4. Apply verbal diffusing techniques

5.5. Apply special situation interview techniques
5.6. Identify communication technology components
5.7. Use technology-specific communication techniques
5.8. Apply accepted principles of documentation
5.9. Apply diversity, equity, and inclusion communicating principles
5.10. Identify medial word roots, prefixes, and suffixes
5.11. Define common medial abbreviations
5.12. Interpret common medical symbols
5.13. Use medical terms related to body structures
5.14. Use medical terms related to body systems

6. Apply correct patient movement techniques

Assessment Strategies

6.1. Oral, written, graphic, and/or skill assessment

Criteria

6.1. Define body mechanics
6.2. Distinguish between urgent and non-urgent patient movement techniques
6.3. Apply patient position guidelines
6.4. Apply correct restraint techniques
6.5. Apply patient movement guidelines
6.6. Use patient movement equipment safely

7. Apply pathophysiology principles related to EMT scope of practice

Assessment Strategies

7.1. Oral, written, graphic, and/or skill assessment

Criteria

7.1. Quantify the components of ambient air
7.2. Maintain a patent airway
7.3. Address obstructions at various anatomic levels
7.4. Evaluate respiratory changes associated with respiratory compromise
7.5. Quantify minute ventilation
7.6. Explain alveolar ventilation
7.7. Evaluate perfusion
7.8. Compare and contrast aerobic and anaerobic metabolism
7.9. Compare and contrast the functions of blood components
7.10. Evaluate how systemic vascular resistance affects the body
7.11. Compare and contrast hydrostatic and oncotic pressures

8. Analyze body system functions

Assessment Strategies

8.1. Oral, written, graphic, and/or skill assessment

Criteria

8.1. Explain the importance of different anatomical positions
8.2. Analyze components of the musculoskeletal system
8.3. Analyze the function of the musculoskeletal system
8.4. Analyze components of the respiratory system
8.5. Analyze the function of the respiratory system
8.6. Analyze components of the circulatory system
8.7. Analyze the function of the circulatory system
8.8. Analyze components of the nervous system
8.9. Analyze the function of the nervous system
8.10. Analyze components of the endocrine system
8.11. Analyze the function of the endocrine system
8.12. Analyze components of the reproductive system
8.13 Analyze the function of the reproductive system
8.14. Analyze components of the integumentary system
8.15. Analyze the function of the integumentary system
8.16. Analyze components of the digestive system
8.17. Analyze the function of the digestive system
8.18. Analyze components of the lymphatic system
8.19. Analyze the function of the lymphatic system

9. Characterize human development stages

Assessment Strategies

9.1. Oral, written, graphic, and/or skill assessment

Criteria

9.1. Compare and contrast the anatomical differences among different age groups
9.2. Compare and contrast physiological difference among different age groups
9.3. Analyze infant development
9.4. Analyze toddler development
9.5. Analyze pre-school aged child development
9.6. Analyze school-aged child development
9.7. Analyze adolescent development
9.8. Analyze early-adulthood development
9.9. Analyze middle adulthood development
9.10. Analyze late adulthood development

10. Apply pharmacological principles as related to the EMT scope of practice

Assessment Strategies

10.1. Oral, written, graphic, and/or skill assessment

Criteria

10.1. Analyze medication profiles
10.2. Analyze metabolism and excretion
10.3. Identify the medications used by an EMT
10.4. Identify indications of medications administered by EMTs
10.5. Identify the expiration dates of medications
10.6. Function with legal parameters applicable to the EMT scope of practice regarding medication administration
10.7. Analyze the risk of polypharmacy for all age groups

11. Administer medications safely with the EMT scope of practice

Assessment Strategies

11.1. Oral, written, graphic, and/or skill assessment

Criteria

11.1. Apply safe medication administration practices
11.2. Administer medications through routes within the EMT scope of practice
11.3. Validate the right patient
11.4. Validate the right medication
11.5. Validate the right dosage
11.6. Validate the right route
11.7. Validate the right time
11.8. Validate the right documentation
11.9. Reassess patient after medication administration
11.10. Apply medication cross-check safety principles
11.11. Use resources for safe administration of weight-based dosing

12. Relate the anatomy of the airway-to-airway management

Assessment Strategies

12.1. Oral, written, graphic, and/or skill assessment

Criteria

12.1. Explain patency of the airway
12.2. Analyze respiratory compromise

12.3. Explain age-related variations in pediatric patients
12.4. Differentiate between an adequate and inadequate airway
12.5. Compare and contrast the signs and symptoms of a patient with an adequate and inadequate airway
12.6. Differentiate swelling of the airway due to trauma or infection
12.7. Identify the anatomical structures of the airway

13. Analyze the anatomy of the airway related to process of respiration

Assessment Strategies

13.1. Oral, written, graphic, and/or skill assessment

Criteria

13.1. Analyze causes for inadequate respiration
13.2. Analyze vascular structures that support respiration
13.3. Analyze how the diaphragm and accessory muscles aid in ventilation
13.4. Compare and contrast adequate tidal volume among various patients
13.5. Analyze alveolar ventilation in terms of dead space
13.6. Interpret the results of a CO2 monitoring device
13.7. Determine when to intervene based on tidal volume
13.8. Analyze alveolar ventilation in terms of tidal volume
13.9. Analyze alveolar ventilation in terms of vital capacity
13.10. Analyze alveolar ventilation in terms of minute volume
13.11. Analyze alveolar ventilation in terms of residual volume

14. Apply airway management techniques within the scope of EMT practice

Assessment Strategies

14.1. Oral, written, graphic, and/or skill assessment

Criteria

14.1. Analyze oxygen concentration for oxygen delivery devices for all life-span categories
14.2. Explain reasons for interruption of ventilation
14.3. Explain the physiology and pathophysiology of ventilation
14.4. Demonstrate techniques of a tracheobronchial suctioning
14.5. Demonstrate techniques of upper airway suctioning
14.6. Explain anatomy as it relates to the use of non-visualized airways
14.7. Identify components of non-visualized airways
14.8. Outline indications and contraindications for use of non-visualized airways
14.9. Demonstrate insertion and use of non-visualized airways

14.10. Demonstrate the removal of a non-visualized airway
14.11. Identify gastric distention
14.12. Demonstrate gastric decompression with the usage of an advanced airway*
14.13. Demonstrate head tilt-chin lift method
14.14. Demonstrate modified jaw thrust method
14.15. Demonstrate the need for either nasopharyngeal or oropharyngeal airway devices
14.16. Demonstrate the use of nasopharyngeal or oropharyngeal airway devices
14.17. Explain oxygen safety considerations
14.18. Demonstrate safe oxygen cylinder handling
14.19. Use an oxygen cylinder
14.20. Demonstrate the ventilation of a patient
14.21. Demonstrate use of oxygen delivery devices
14.22. Apply non-invasive positive pressure ventilation*
14.23. Demonstrate end-tidal CO2 continuous monitoring*
14.24. Demonstrate use of automated transport ventilator during CPR*
14.25. Demonstrate relief of foreign body airway obstruction (FBAO) through visualization

15. Apply patient assessment procedures within the scope of EMT practice

Assessment Strategies

15.1. Oral, written, graphic, and/or skill assessment

Criteria

15.1. Manage common scene hazards
15.2. Perform scene assessment
15.3. Obtain pertinent SAMPLE history
15.4. Assess history of the present complaint using OPQRST questions
15.5. Apply clarifying history questions, if needed
15.6. Identify chief complaint
15.7. Determine if critical life-saving interventions are needed
15.8. Apply components of a primary assessment/survey
15.9. Perform a primary assessment
15.10. Determine if age-related assessment considerations apply
15.11. Modify assessment based on patient age
15.12. Obtain vital signs
15.13. Perform reassessment
15.14. Perform secondary assessment
15.15. Identify pertinent negatives (F,F)
15.16. Identify pertinent positives
15.17. Determine the type of assessment needed
15.18. Assess body systems for need to apply treatment as indicated by the chief complaint
15.19. Monitor pulse oximeter

15.20. Take non-invasive blood pressure
15.21. Apply ECG monitoring patches for obtaining acquisition and transmission of 12, 15, and 18-lead ECGs.*
15.22. Monitor blood glucose.
15.23. Apply guidelines for field triage.
15.24. Make patient transport decisions.
15.25. Apply end-tidal (ETCO2) CO2 monitoring equipment if used for a non-visualized or advanced airway.

16. Manage medical care within the scope of EMT practice

Assessment Strategies

16.1. Oral, written, graphic, and/or skill assessment

Criteria

16.1. Administer appropriate medications within EMT scope of practice
16.2. Manage age-appropriate treatment(s)
16.3. Manage any altered status
16.4. Manage abdominal and gastrointestinal emergencies
16.5. Manage infectious disease emergencies
16.6. Manage endocrine disorder emergencies
16.7. Manage psychiatric disorder emergencies
16.8. Manage cardiovascular emergencies
16.9. Manage toxicological emergencies
16.10. Manage respiratory emergencies
16.11. Manage immunology emergencies
16.12. Manage non-traumatic musculoskeletal emergencies
16.13. Manage emergencies related to the eyes, ears, nose, and throat
16.14. Implement a treatment plan for managing medical emergencies

17. Manage trauma care within the EMT scope of practice

Assessment Strategies

17.1. Oral, written, graphic, and/or skill assessment

Criteria

17.1. Modify assessment as needed for trauma patients
17.2. Implement a treatment plan for managing trauma emergencies
17.3. Manage age-appropriate treatment for trauma patients
17.4. Manage bleeding
17.5. Manage chest trauma
17.6. Manage abdominal and genitourinary trauma
17.7. Manage orthopedic trauma
17.8. Manage soft tissue trauma

17.9. Manage head, facial, neck, and spine trauma
17.10. Manage special considerations in trauma
17.11. Manage environmental emergencies
17.12. Manage multi-system trauma
17.13. Manage burn trauma
17.14. Apply the spinal stabilization assessment to determine if stabilization is needed
17.15. Analyze kinematics of trauma
17.16. Apply principles of the Golden Hour-Golden Period
17.17. Calculate a revised trauma score
17.18. Calculate a Glasgow Coma Scale score

18. Address special considerations in patient treatment within the scope of EMT practice

Assessment Strategies

18.1. Oral, written, graphic, and/or skill assessment

Criteria

18.1. Modify assessment for patients with special challenges
18.2. Modify assessments for patients with physical limitations
18.3. Modify assessments for patients with cognitive limitations
18.4. Modify treatment for patients with special challenges
18.5. Identify home healthcare equipment that informs of patient status and care
18.6. Manage gynecological emergencies
18.7. Modify assessment for pregnant female patients in a traumatic event
18.8. Manage obstetric emergencies
18.9. Differentiate between normal and complex labor and delivery
18.10. Manage normal labor and delivery
18.11. Manage complex labor and delivery
18.12. Manage newborn emergencies

19. Address shock within the scope of EMT practice

Assessment Strategies

19.1. Oral, written, graphic, and/or skill assessment

Criteria

19.1. Differentiate various signs and symptoms of shock
19.2. Identify patients in shock
19.3. Characterize stages of shock
19.4. Identify types of shock
19.5. Apply treatment(s) based upon the type of shock the patient is suffering
19.6. Apply age-related shock treatment considerations

20. Resuscitate patient

Assessment Strategies

20.1. Oral, written, graphic, and/or skill assessment

Criteria

20.1. Treat cardiac arrest through the use of external defibrillation devices
20.2. Treat cardiac arrest through the use of manual external defibrillation devices*
20.3. Differentiate appropriate application of CPR and CCR
20.4. Apply CCR techniques*
20.5. Perform appropriate BLS per AHA guidelines
20.6. Perform appropriate age-related CPR per AHA guidelines